

CLAIMS

What is claimed is:

- 1 1. A method comprising:
 - 2 receiving a message indicating that a destination port of a multiservice
 - 3 network is congested; and
 - 4 reducing incoming traffic to the congested port to a guaranteed
 - 5 bandwidth of traffic until the destination port is uncongested.
- 1 2. The method of claim 1 wherein the network is selected from the group
 - 2 consisting of:
 - 3 Asynchronous Transfer Mode (ATM) network, Frame Relay (FR)
 - 4 network, voice network, Circuit Emulation Service (CES) network, and Internet
 - 5 Protocol (IP) network.
- 1 3. The method of claim 2 further comprising
 - 2 scheduling a grant for a virtual output queue associated with the
 - 3 congested destination port.
- 1 4. The method of claim 3 wherein scheduling a grant further comprises

2 determining whether a theoretical departure time for at least one virtual
3 output queue is less than a current time.

1 5. The method of claim 4 wherein scheduling a grant further comprises
2 scheduling a grant for the virtual output queue having the smallest
3 theoretical departure time.

1 6. The method of claim 4, wherein scheduling a grant further comprises
2 scheduling a grant to one of the virtual output queues associated with
3 the congested destination port using either a round robin scheduling method or
4 a priority based scheduling method.

1 7. An apparatus comprising:
2 means for receiving a message indicating that a destination port of a
3 multiservice is congested; and
4 means for reducing incoming traffic to the congested port to a
5 guaranteed bandwidth of traffic until the destination port is uncongested.

1 8. The apparatus of claim 7 wherein the network is selected from the group
2 consisting of:

3 Asynchronous Transfer Mode (ATM) network, Frame Relay (FR)
4 network, voice network, Circuit Emulation Service (CES) network, and Internet
5 Protocol (IP) network.

1 9. The apparatus of claim 8 further comprising
2 means for scheduling a grant for a virtual output queue.

1 10. The apparatus of claim 9 wherein said means for scheduling a grant
2 further comprises
3 means for determining whether a theoretical departure time for at least
4 one virtual output queue is less than a current time.

1 11. The apparatus of claim 10 wherein said means for scheduling a grant
2 further comprises
3 means for scheduling a grant for the virtual output queue having the
4 smallest theoretical departure time.

1 12. The apparatus of claim 10, wherein said means for scheduling a grant
2 further comprises
3 means for scheduling a grant to a virtual output queue using either a
4 round robin scheduling method or a priority based scheduling method.

1 21. The apparatus of claim 20 further comprising
2 a scheduler to schedule a grant for a virtual output queue associated
3 with the congested destination port.

1 22. The apparatus of claim 21 further comprising
2 a calculator to determine whether a theoretical departure time for at least
3 one virtual output queue is less than a current time.

[illegible]